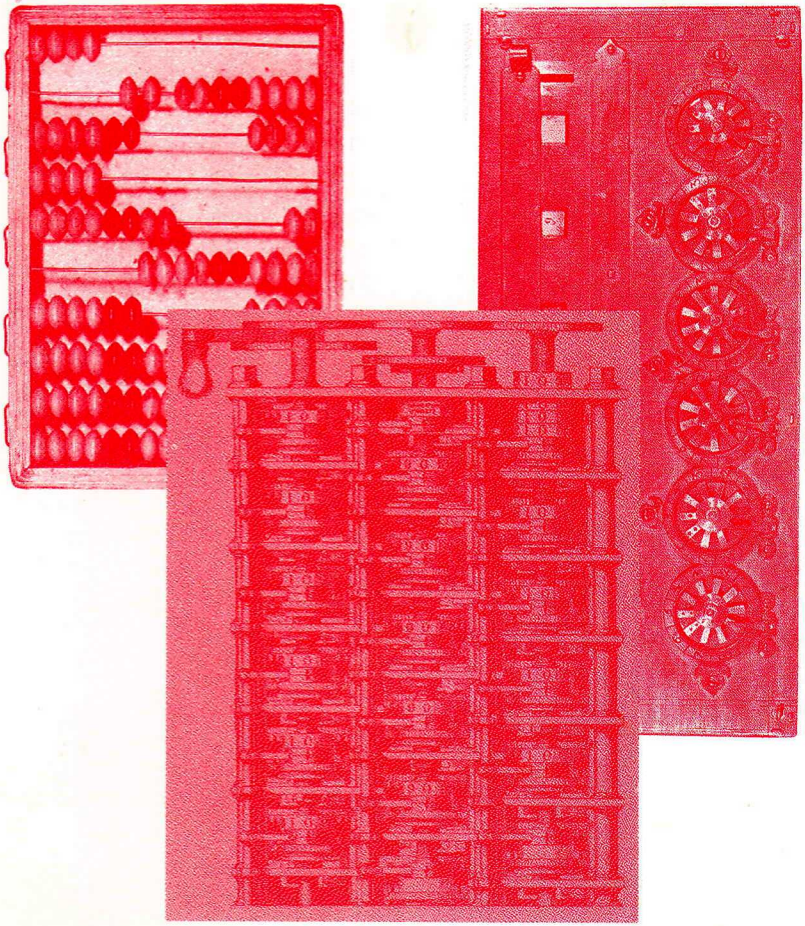
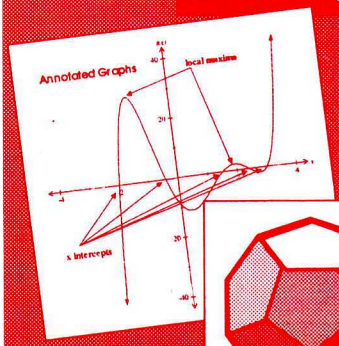
RM User

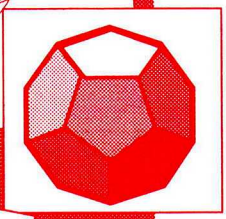
Volume 12:2
July 1997

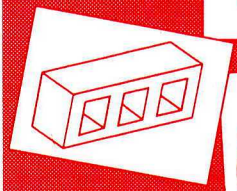


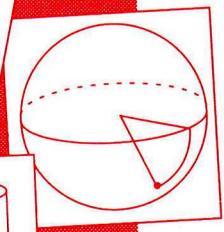
FX Draw

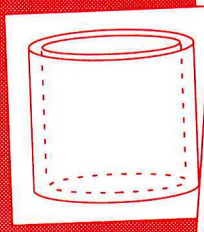
Available for IBM (Windows 3.1 or later) Requires a Windows word processor, eg MS Word, Windows Write etc.

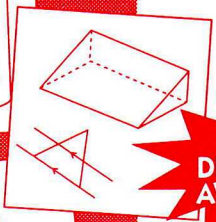


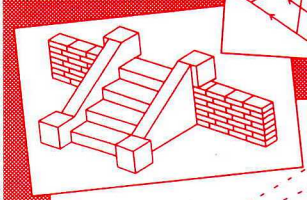


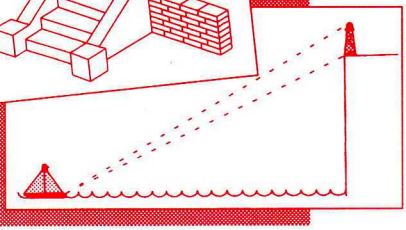












FX Draw is a drawing package designed for mathematics. You can draw almost any required mathematical diagram with a minimum amount of input from yourself.

There are tools for drawing angles, graphs, normal distribution curves, Venn diagrams, right-angled triangles and a host more. FX Draw is an OLE object, and fits seamlessly into any Windows word processor, such as Microsoft Word. Your diagrams will be inserted into your document and appear on your screen as they will appear when printed. The diagrams can be moved, resized and edited from within your document.

Single user	**£49**
Network /16 users	**£150**
Secondary Site	**£225**

Please add VAT

Over 300 ready-drawn diagrams included!

FREE DEMO DISK AVAILABLE!

MORE INFO ON OUR WEB SITE!
www.spasoft.demon.co.uk

SPA

SPA, PO Box 59, Tewkesbury, Glos, GL20 6AB
Tel: 01684 833700 Fax: 01684 833718

Contents

Software Production Associates 2
Contents 3
Deadlines for the next issues 3
Missing a Magazine? 3
Committee, Ad Rates 4
News and Editorial 5
Question-and-Answer Sessions 7
Visual Dialogscript 2.05 11
Top Ten Mistakes in Education 13
The Typography of This Issue 16
Training Weekend Details 17, 24
RM Direct 18, 23
Application Form for Training 19-22
Letters 25
Access in School Administration 26
UK-Schools 30
Peter the Printer 32
Shoptalk 36
Got A Problem? 37
Membership Form 38
The New RM Software Lending Library 39
FLO 40

Deadlines for the next issues

RM User 12.3 ..... 30 September 1997
RM User 12.4 ..... 20 October 1997

The date shown above is the ***latest*** date for copy for the magazine. You will normally receive the magazine about 2-3 weeks after the date shown.

Missing a Magazine?

Back issues of the magazine are available from the editor - please contact me for more details. I am delighted to announce that through the kind assistance of Tim Clark, we now have the URL www.rmug.org.uk. Is there anyone out there who might like to help manage the pages? There is already a list of phone numbers of the suppliers who have been reviewed in the past, contents pages and a few articles. I am open to suggestions for or help with expansion of the pages.

 © RM User Group 1997

Committee Members 1996/1997

Chairman Glenn Taylor	1 Frayne Road, Ashton, Bristol BS3 1RU email gtaylor@nailseasch.demon.co.uk	01179 635816 (H) 01275-852251(S)
Vice-Chair Howard Kirkman	St Julians School, Heather Rd, Newport, Gwent email hkirkman@rmplc.co.uk	01633 213226
Secretary Edith Todd	19 Harvey Rd, Walton-on-Thames, Surrey, KT12 2PZ Notre Dame Sen. Sch, Cobham, Surrey	01932 242350 (H) 01932 863560 (S)
Treasurer Hugh Wilding	The Bungalow Ray Lea Road Maidenhead Berkshire SL6 8QA email ccourt@rmplc.co.uk	01628 71633
Membership Secretary Maureen Wernham	RMUG FREEPOST Esher, Surrey KT10 0BR 40 Manor Drive, Hinchley Wood, Esher, Surrey, KT10 0AX	0181 398 1948
Advertising Manager Gisela Legg	Restholm, Piddington Lane, High Wycombe, Bucks, HP143BD email100576,3717@compuserve.com	
Editor David Palmer	Ackworth School, Pontefract, West Yorkshire, WF7 7LT email palmerdavid@compuserve.com	01977 615225
Peter Richards **Software Librarian**	St Julians School, Heather Road, Newport, Gwent	01633 213226
John Holden	51 Cardigan Rd, Reading, RG1 5QL	01734 662689

Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

Rates

Back Cover **£60** Inside Cover **£50** Full Page **£30** Half Page **£20**

These rates assume black-on-white, camera-ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Please make cheques payable to *RM User Group*

 © RM User Group 1997

NEWS AND EDITORIAL

Mentus fugit

I am often heard to say that I couldn't get any busier. This is patently untrue since every time I say it, a raft of new tasks appear on the horizon. I have decided to adopt a new strategy and from now on will go around saying that I couldn't get any richer...

17 other offences

As if I didn't have enough problems, my new laptop is driving me nuts.

As I try to write this text in Pagemaker, the super-sensitive touch pad reacts to any movement as quickly as one of those little infra-red boxes that detect intruders. The cursor then leaps to another part of the page and the next few words appear there. I have tried preparing sections in Works 4 but that is even more like fruit-cake land. If I want a simple table, I get a singing, dancing spreadsheet - and where in Word2 I could format each word in a table cell differently, now that is no longer possible.

What goes on in their usability labs?? Pagemaker's spellchecker has NO imagination at all - and can't even spell Pagemaker. I am intrigued to note that all the files I get from colleagues are in Word2 format while all the files I get from students are in Word 6, 7 or 97 format!

The other thing I can't figure out at all is how to get a picture in Works4. I have tried inserting and get (both on screen and on the printout) <Picture>! I then tried loading the picture into Paintshop and copying and pasting it, and then I get a little object with the picture name under it - this time it even shows the name of the file I opened in Paintshop. Life used to be so simple!!! If Pagemaker can create HTML files, why can't it open them?

My last moan (for now) is to do with the very slick Logitech PageScanner I got with the laptop. Up till now I have been scanning pictures (of local history!) but tonight I tried to use the text recognition - crash, crash, crash!!! Fortunately, my trusty old Windows 3.1 version of Textbridge installed and works like a dream - as it did from day one!

Smoking nudes

One pleasant duty I performed on your behalf was to attend the launch of a new CDROM called 'Interact'.

Produced by West Yorkshire Playhouse, it offers a variety of ways to explore the Theatre and in particular the current production 'Don Juan' showing how all the different departments contribute. It is very well done and I encourage you to call them on 0113 213 7850 if you are interested. It costs £70 for a single CD but only £5 for extra copies to use on your site. There is going to be a free or very low-cost option to download the extra resources for the shows that follow this one.

After seeing the software, we were invited to see the real thing. As we went into the auditorium, we noticed signs saying 'This production has loud noises, strobe lights, smoke and nudity.' I was wondering if they would all happen at once and which bits were going to be smoking!

How fast can you read?

I have been looking at a program called Vortex which is designed to allow you to read faster. I got up to some unbelievable speed before a new hard-disc arrived for the machine I was

 © RM User Group 1997

using it on. I haven't got around to moving everything off the old disc but when I do I'll review it in more depth. If you want to explore it, check www.halcyon.com.

I also want to look at Encarta 97 (hopefully before 98, but I'm not making any rash promises).

I have managed to install but not yet run, Teddytronics. It is a business simulation from the same company that produce the excellent SECOS datasets. If you want demo discs for the latter or more information about the former, please call them on 01279 652183.

Free Trial

Those very nice people at Economatics are offering a free 30-day trial of their Smartbox. It comes with their own control software which is quite like Logo in that you can build procedures. They also include a demo version of Logicator. Try the Logo first because the Logicator demo has so many sample routines that you will be busy for hours and hours!! Their number is 0114 281 3344.

IEEE Journal of Technology Computer-Aided Design (TCAD)

IEEE is offering one of the first electronic-only journals through their Web site at http://www.ieee.org/journal/tcad. Since its launch, 11 engineering papers have been received and to date, three have been accepted and are available on the journal Web page. Papers are reviewed by a Board of Publications headed by the journal's editor-in-chief. Subjects should be of interest to the scientific, engineering, and related technical community and be very numerical and theoretical. In particular, the Board welcomes papers that make special use of the electronic medium to create dynamic visual displays.

For more information and author guidelines, see http://www.ieee.org/journal/tcad or e-mail Mark Law at law@tec.ufl.edu.

Microsoft Web Site interrupted by Cracker

Microsoft's Web site was disrupted briefly by a computer cracker who broke into the site's server computers by exploiting a flaw in the Microsoft Internet server software.

The site was down only about 10 minutes, but company officials say users may have experienced more problems because the company currently is upgrading its servers.

Microsoft has posted a fix for the flaw on its Web site, and a marketing director says all that was needed to get the machines going again was a reboot. (Wall Street Journal 23 Jun 97) http://www.wsj.com

The Front Cover

The pictures on this issue's front cover feature earlier attempts at mechanical calculation.

The first is a 13th century abacus, a very ancient form of calculating machine that probably originated in India.

The second is a calculating machine invented by the French philosopher Blaise Pascal in 1642. The wheels are numbered from zero to ten, and correspond to units, tens, hundreds, thousands, tens of thousands, hundreds of thousands.

The bottom picture is of a "Difference Machine" invented by Charles Babbage, the 19th century inventor who is today acknowledged as the father of the computer. His machine failed because the parts couldn't be machined precisely.

 © RM User Group 1997

QUESTION AND ANSWER SESSIONS

InSITE Seminars Autumn 1996

Once again, the question-and-answer sessions at the Autumn 1996 round of InSITE seminars produced many queries from yourselves. Here are just some of the RM Net LM and RM Connect related questions you asked.

Question:
On my RM Net LM system, I am unable to use Windows File Manager to move or copy files between user directories. The error message is usually "Out of memory" or similar.

Answer:
RM Net LM was designed with all the user home areas located under a "flat" directory structure. This area is seen as drive R:, when you are logged on as ADMIN at a station. If, for example, you have 1200 users on your RM Net LM system, you will then have 1200 sub-directories in drive R:.
If you have perhaps 1000 or more users on your network, and you try to use Windows File Manager to view drive R:, you will probably notice that:
File Manager takes a long time to display all the sub-directories of R:.
If File Manager can display all the user directories, you may see "Out of memory" messages when you try to move, copy or delete files in these directories.
The "Out of memory" messages are not related to the amount of RAM installed in the station. They happen because Windows 3.1 File Manager cannot cope with so many sub-directories within one directory. As Microsoft are no longer working on updates to Windows 3.1, it is unlikely that they will ever fix this problem.
So what are the solutions?
Many InSITE customers have told me their own workarounds, including:
Using "File Manager-type" products such as XTree Gold, or shareware Windows file management tools. If you have access to the Internet, www.shareware.com is a good starting page when hunting for shareware software.
Connecting a Windows 95 computer to the RM Net LM network, and using Windows Explorer to manage files in the user directories.
Without the aid of additional software, files can be copied between user directories by using COPY , XCOPY, or RMTREE COPY commands at the MS DOS prompt at a station.

*****

Question:
ON my RM Net LM network, when users run Paintbrush, they are offered P: or U: as the drive to save files onto - not N:. How can I make sure that the default drive for saving work is N: ?

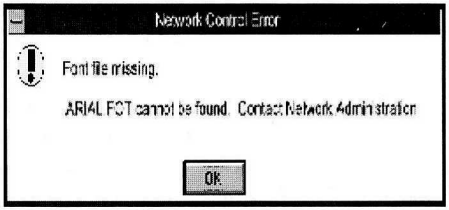
Answer:
The properties for the icon for Paintbrush should be as follows:
Command Line: PBRUSH.EXE

 © RM User Group 1997

Working Directory:
That is, the Command line field should be PBRUSH.EXE, without specifying a path name. The Working Directory field should be blank.
Also, if you are setting up icons on user desktops for other software packages, you should ensure that the Working Directory is blank. Otherwise, the application might not offer N: as the default directory for saving work.

* * * * *

Question:
Occasionally users cannot logon at my RM Net LM stations correctly.....
When this happens, they may see a sequence of error messages similar to this one:

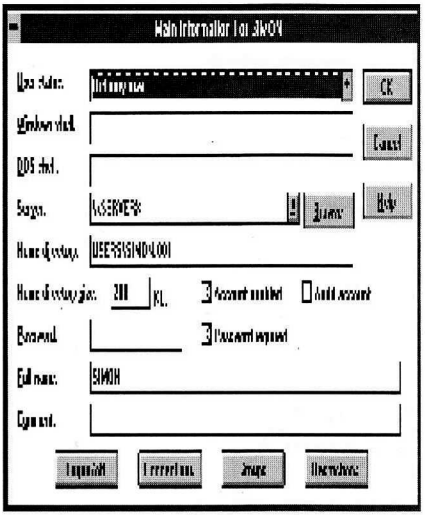


Eventually, this message may be displayed:

Network Control Error
User Shell cannot be started
One or more programs comprising your Windows environment cannot be started. Contact Network Administrator
OK

At this point, all the user can do is log off from the station.

Answer:
These messages will appear if access rights have been deleted from that user's home directory. Access rights can be lost by a number of means, normally inadvertent use of the "Permit Tree" or "Revoke Tree" facility within the NET ADMIN administration utility.
The quickest way of restoring a user's access rights is to load the user details using RM User Manager, so that this page is displayed:



At this screen, do not make any changes simply click on OK. This will reset the correct access rights into the user's home directory

* * * * *

RM Connect
Question:
On my RM Connect network, whilst logged on as Administrator at a station, I occasionally want to access files on the hard disks of other stations on the network. Is this possible?

Answer:
All RM Connect stations have a hidden

 © RM User Group 1997

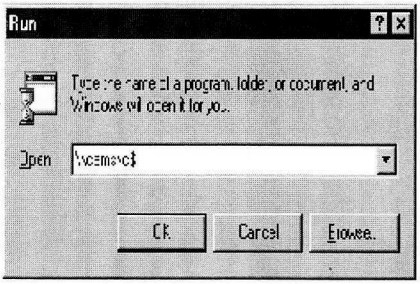
share called C$, which allows (only!) Administrator users to view files on that computer, from another station.

The quickest way to access the hard disk of another station is to :

Find out the name of the station whose hard disk you wish to access.

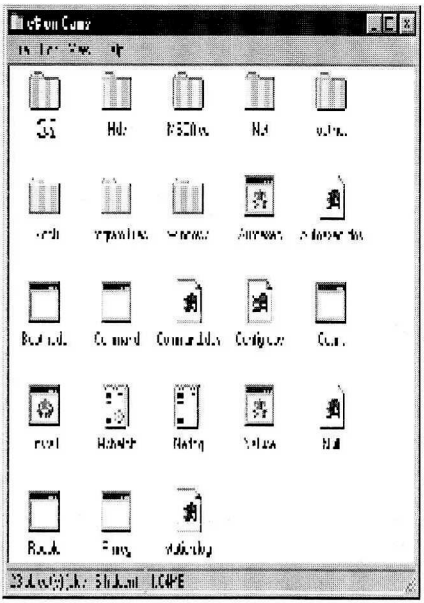
Select Start, Run, and enter the following text in the Open field:
\\station_name\c$
where station_name is the name of the station you wish to access.

In the following example, we are going to access the hard disk of a station called CAMS.



Windows Explorer will then display the files and folders on CAMS station, as follows:

<Picture at top of next column>



* * * * *

Question:
I have set up many printers on my RM Connect network, but users cannot print from MS DOS applications except on stations that have a local printer attached. Why is this?

Answer:
By default, when you assign a printer to a station using RM Station Manager, the "Port" field is blank.
Windows applications will print to this printer via its "UNC" name, or Universal Naming Convention name. This will be in the form of: \\server or station withthe printer attached \ queuename e.g. \\server1\laser

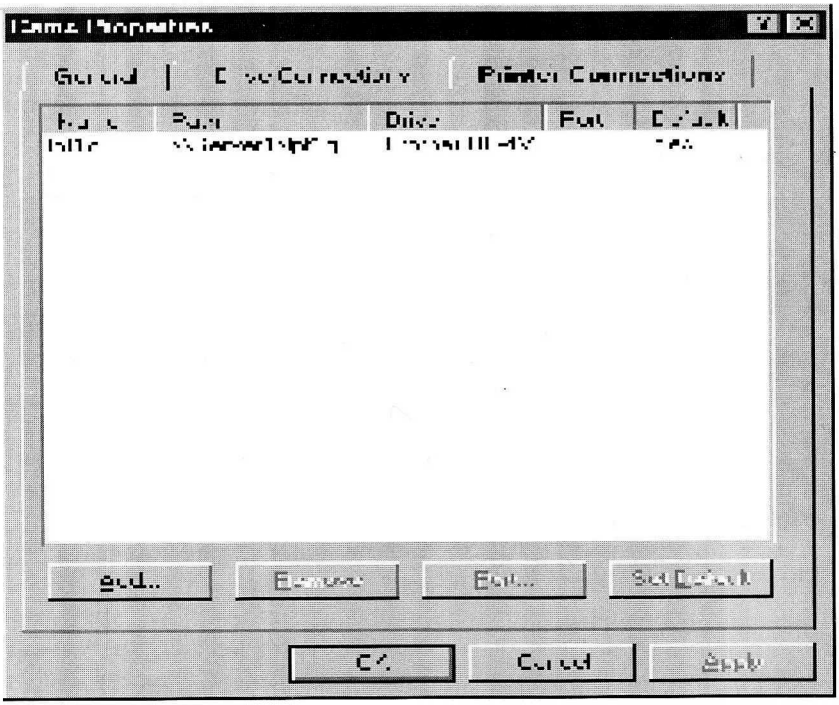
However, most MS DOS applications expect to "see" a network printer as either

 © RM User Group 1997

LPT1, LPT2 or LPT3. Sometimes, they will only print to LPT1.
Therefore, if you are making a networked printer available to a station and users at that station want to print from MS DOS applications, you will need to:
Click on the name of that printer in RM Station Manager, then click on the Port button.
Select LPT1 for that printer, if you want it to be the default printer for MS DOS applications run at that station, then click on OK.

The port name will now be filled in, as follows:

The reason why MS DOS applications print successfully on stations that have a local parallel printer attached, is that they will automatically "see" that printer as LPT1.



 © RM User Group 1997

VISUAL DIALOGSCRIPT 2.05

Written by Andrew Mitchell.

Visual DialogScript is a basic programming language for Windows (3.1 or higher). It is produced by JM Tech. It uses simple understandable commands, similar to batch files, but capable of quite a lot more. You can create programs that can run in the background, carrying out jobs you set.

For example you could make a program that remained invisible, but warned you when your hard drive got low on free space. Or you could create a proper program, with the capacity to do many functions which are very useful and carry out common tasks.

You can create programs which can access the Registry, do MCI (CDAUDIO, AVI, MIDI), run other programs, open web pages, interact with other programs, make INI files, interact with the user - and it doesn't stop there. It has many functions for obtaining information from Windows, which give you greater control of your working environment, and more possibilities for your program.

A very basic example would be to make an alarm clock (you are taught this in the step by step tutorial). It results in a small rectangular window, with text on the left-hand side that shows the time, a button to set a time for the alarm to go off, a button to set yourself a message, a button to set a sound to play, a button to set a program to run. The script itself is very small (about 70 lines of code) and could be created in about half an hour, but it makes a very practical application. The appearance of your program can be easily made by running the Dialog Wizard (one of VDS's many tools). The code is then added to the script window, and you take over. You must create a TIMER event, this is something the program reverts back to every second to check the commands inside. In here you must place a command which updates the text in your program every second to the current time by the Windows clock (using the @DATETIME function). In here you would also add a command

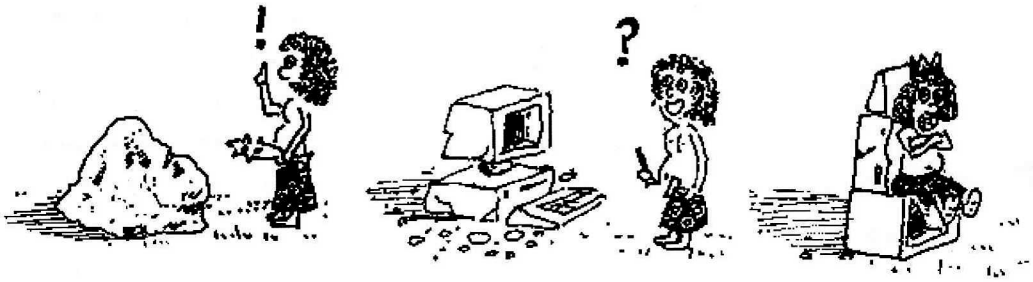
 © RM User Group 1997

that checks if the time specified by the Set button equals the real time. If it does you make it display the message (INFO command), play the sound (PLAY command), and run the program (either RUN or SHELL OPEN command). All this can be created using very simple and logical commands. You can then make an icon (using another of VDS's tools) and create an EXE file. Creating an EXE file is very simple, you select an icon and then click a button and it compiles the code.

Visual DialogScript comes with a few useful tools (some of which I have already mentioned). One of them tests your application for errors. If you run the script, and there is an error in it, VDS alerts you of the mistake and offers you help to solve it.

VDS is perfect for making small, personal programs to make your Windows life easier. It is probably not as powerful as Visual Basic, but it is very useful, and quite satisfying if you are making programs for fun. It is very easy to learn, and is a good entry into programming, for students and adults. Obtain a demo copy from http://www.netlink.co.uk/users/jmtech.

Please note that since this review was written version 2.12 has been released, which has ironed out a few bugs and added some new, very useful commands. You can obtain a copy from the web address above or the new web address, http://www.jm-tech.com.



 © RM User Group 1997

TOP TEN MISTAKES IN EDUCATION

Obviously, I believe that the school system is making a great many mistakes. Here are my ten favorites, favorite not because I like them but because eradicating them would go so far towards helping kids learn:

Mistake #1: Schools act as if learning can be disassociated from doing.

There really is no learning without doing. There is the appearance of learning without doing when we ask children to memorize stuff. But adults know that they learn best on the job, from experience, by trying things out. Children learn best that way, too. If there is nothing to actually do in a subject area we want to teach children it may be the case that there really isn't anything that children ought to learn in that subject area.

Mistake #2: Schools believe they have the job of assessment as part of their natural role.

Assessment is not the job of the schools. Products ought to be assessed by the buyer of those products, not the producer of those products. Let the schools do the best job they can and then let the buyer beware. Schools must concentrate on learning and teaching, not testing and comparing.

Mistake #3: Schools believe they have an obligation to create standard curricula.

Why should everyone know the same stuff? What a dull world it would be if everyone knew only the same material. Let children choose where they want to go, and with proper guidance they will choose well and create an alive and diverse society.

Mistake #4: Teachers believe they ought to tell students what they think it is important to know.

There isn't all that much that it is important to know. There is a lot that it is important to know how to do, however. Teachers should help students figure out how to do stuff the students actually want to do.

Mistake #5: Schools believe instruction can be independent of motivation for actual use.

We really have to get over the idea that some stuff is just worth knowing even if you never do anything with it. Human memories happily erase stuff that has no purpose, so why try to fill up children's heads with such stuff? Concentrate on figuring out why someone would ever want to know something before you teach it, and

 © RM User Group 1997

teach the reason, in a way that can be believed, at the same time.

Mistake #6: Schools believe studying is an important part of learning.

Practice is an important part of learning, not studying. Studying is a complete waste of time. No one ever remembers the stuff they cram into their heads the night before the exam, so why do it? Practice, on the other hand, makes perfect. But, you have to be practicing a skill that you actually want to know how to perform.

Mistake #7: Schools believe that grading according to age group is an intrinsic part of the organization of a school.

This is just a historical accident and it's a terrible idea. Age-grouped grades are one of the principal sources of terror for children in school, because they are always feeling they are not as good as someone else or better than someone else, and so on. Such comparisons and other social problems caused by age-similar grades cause many a child to have terrible confidence problems. Allowing students to help those who are younger, on the other hand, works well for both parties.

Mistake #8: Schools believe children will accomplish things only by having grades to strive for.

Grades serve as motivation for some children, but not for all. Some children get very frustrated by the arbitrary use of power represented by grades and simply give up.

Mistake #9: Schools believe discipline is an inherent part of learning.

Old people especially believe this, probably because schools were seriously rigid and uptight in their day. The threat of a ruler across the head makes children anxious and quiet. It does not make them learn. It makes them afraid to fail, which is a different thing altogether.

Mistake #10: Schools believe students have a basic interest in learning whatever it is schools decide to teach to them.

What kid would choose learning mathematics over learning about animals, trucks, sports, or whatever? Is there one? Good. Then, teach him mathematics. Leave the other children alone.

This list does not detail all that is wrong with school, neither do the teaching architectures we propose fix all that is wrong with education. Nevertheless they give an idea of where to begin. And, I believe that high quality software could help make these changes possible.

 © RM User Group 1997

* What is the Cultural Literacy movement? * What does John Holt say about current methods of teaching in his book "How Children Fail"? * What is wrong with multiple choice tests? * What is wrong with the "right answer" system? * What does Mike Royko think about "cultural awareness"? * Why should we not trust "facts"? * Why does extrinsic motivation fail?

* Why should education focus on individual student needs? * What educational rights should students have? * What is an open curriculum?

* How is the grade system limiting education? * How do students succeed in today's schools?

* How did current educational models develop? * When did the trend of measurement mania begin in education? * Why do children lack motivation in the classroom? * Why do traditional types of biology assignments fail to hold students' interests? * Why is the educational system failing?

* How does a fixed curriculum inhibit learning? * What are the main problems with our current fixed curricula? * Is school as fun as it should be?

* How can someone really learn something? * How can we change schools in order to help our children learn better? * What should school curricula be like? * What eight things can be done to make schools better? * How can computers improve education? * How should courses be designed?

* How are curiosity and curriculum antithetical? * What is the main problem with standardized tests? * Why is it better to acquire knowledge in service of a goal?

* How should we teach our children in the classroom? * What is the attitude of students towards classroom learning? * What are the differences between facts, subjects, and domains?

 © RM User Group 1997

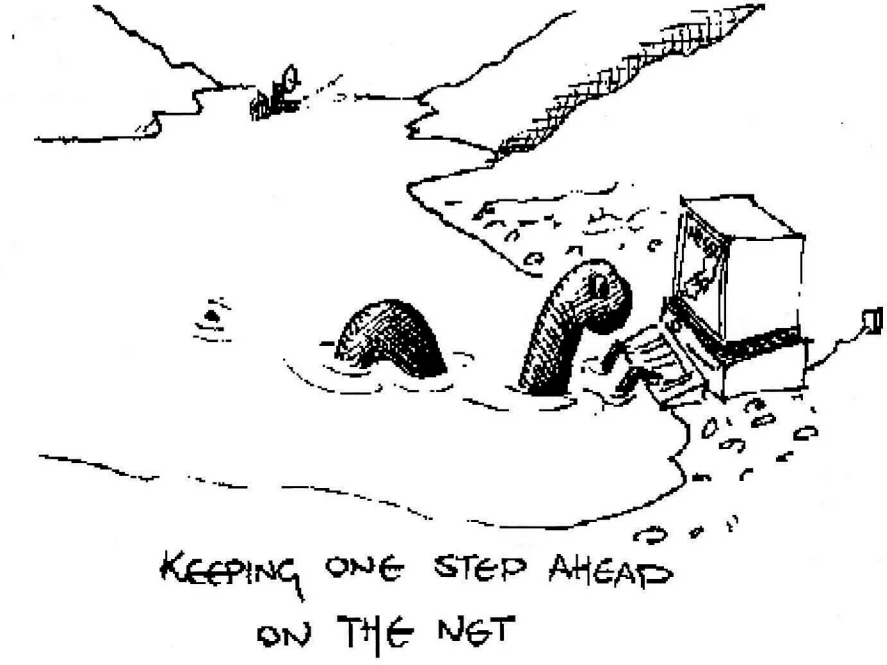
THE TYPOGRAPHY OF THIS ISSUE

WE have used three typefaces for most of this issue.

The headlines are in 14 point NUEVA BOLD EXTENDED, a fine serif typeface with plenty of impact.

The sub-headings are in 12 point Utopia Semibold. Utopia is a typeface designed by Robert Simbach in 1988 for Adobe. It has a large x-height, open counters and strong detailing, making it ideal for using on faxes where fine detail is often lost in transmission.

The text has been set in Myriad, a sans serif typeface designed by Robert Simbach and Carol Twombly in 1991. It is a "Multiple Master Font" – this means that using Adobe Type Manager we can create our own variant of it by changing the two axes, weight and width (e.g., it can be made as "Myriad Light" or "Myriad Black Extended.)"



 © RM User Group 1997

RMUG 20th Training Weekend - De Vere Hotel Swindon, October 24th - 26th 1997

Main Session Details

Saturday, 9.00 a.m. - 12.15 p.m.

A. RM UPDATE
An update from RM on the latest RM networking solutions. The second half will be an opportunity to have hands-on experience of RM Connect.

B. ACCESS
This session is for those with some experience of Access and to show its use at K.S.4. (If no experience then consider going to Lotus Approach session on Sunday)

C. K.S.3 I.T. TEACHING at the RIVERBANK
One teacher's personal view on how I.T. can be delivered at K.S.3 using Microsoft Word, Excel and Corel Draw. The session will focus on the content of lessons and the way in which they are delivered. Comprehensive notes will be available.

D. CAD
This session will use the Designview CAD software, widely used in schools, and is aimed at total beginners or those with little experience of it. Participants will be able to take away a copy of the software, at no charge, if their school has not already a copy, provided that certain conditions are met.

E. WEB PUBLISHING
A practical session on creating Web pages, including a look at different Web publishing tools & useful Web sites for HTML material.

Saturday, 1.30 p.m. - 4.45 p.m.

A. INTERNET for LEARNING
An update on RM's Internet for Learning and Living Library resources. The second half will be an opportunity for hands-on use.

B. WORD & EXCEL
This session will show how to get Word and Excel to work together - mail merging, linking spreadsheets etc.

C. KEYBITES
A hands-on opportunity to trial Keybites for Windows (formerly Babbage) - a flexible interactive I.T. course for K.S.3 and more - structured, networked or stand-alone, teacher directed, provides continuous pupil records and more.

D. PAGEPLUS
An introduction to this excellent easy to use Desk Top Publishing package. Forget the frustrations of complicated design software. Benefit from a package where high standards can be quickly achieved by all levels of users. First learn the basics of the software's various tools, then extend your capabilities to produce sample projects including frames, text wrapping and colour separation for 4 colour printing.

E. INTERNET ACCESS
An opportunity to spend time 'Surfing the Net'.

RM SURGERIES
Bring your questions to the RM team. Written notice would be appreciated on the Friday evening.

Sunday, 9.00 a.m. - 12.15 p.m.

A. LOTUS APPROACH
The latest RM Connect bundle now includes Lotus Approach. This session will provide an introduction to this database application.

B. MULTIMEDIA AUTHORING
Using Multimedia presentation tools and authoring software for the creation of both teaching materials and interactive computerised lessons.

C. MODELLING
Model Builder is a program making use of a LOGO like language which can be used to construct computer models in situations which are not easy to model using a spreadsheet. This session will look at the software and use it to build a simple model of a supermarket queue and others if time permits.

D. CONTROL
This session will use Logicator and Economatics equipment to show how to do control work in school.

E. INTERNET ACCESS
Another opportunity to 'Surf the Net'

Sunday 1.30 to 3.00
OPEN FORUM
Your opportunity to ask questions of an RM panel.

RM Direct ! - Guaranteed Next Day Delivery

Maximum Security Steel PC Cases

- Secure lock down steel case
- Passed the LPS1214 bench test to resist attack from power tools!
- Allows user access to drives and cable ports
- Maximum security for your PC.

D Series Security Case	**£69.95**	059-382
T Series Security Case	**£99.95**	059-383
Padlock for Security Cases	**£9.95**	059-384

Please note that these security products are not available for next day delivery.

Inkjet Consumables

Special Offer Consumables Bundles for:

- Canon BJC600
- HP DeskJet 1200C
- HP DeskJet 1600C

Canon BJC600 double capacity black + 3 colours	**£25.50**	064-159
HP DeskJet 1200C black + 3 colours	**£76.50**	064-016
HP DeskJet 1600C black + 3 colours	**£77.50**	064-150

Older Model PCs?

- Mice available for PC 186, X Series and M Series computers
- Memory upgrades for M Series PCs are in stock.

See the Software, Peripherals and

To Order Phone 01235 826216 or Fax Free on 0800 833872

© RM User Group 1997

RMUG,

FREEPOST,

ESHER,

SURREY, KT10 0BR

INVOICE **Application Form for Training**

(please photocopy as necessary)

R M User Group
20th Annual Training Weekend
October 24th - 26th 1997

Please indicate your session choices below using the session letters A to E from the program on page 24

	Saturday Morning 9.00 - 12.15	Saturday Afternoon 1.30 - 4.45	Sunday Morning 9.00 - 12.15
First Choice			
Second Choice			

Please indicate any special dietary requirements e.g. vegetarian, vegan etc.

Delegate Rates	Members	Non-members*
Full Weekend $	£270	£295
Saturday Only	£95	£120

All the above prices include meals.

Partners (no training) £40 extra to cover B & B.
Other meals to be paid for as taken.

If any other combination is required, please 'phone 0181 398 1948

$ Inclusive of accommodation with en-suite bathroom

* Inclusive of 1 year's membership of RM User Group

There are some non-smoking bedrooms.

Please tick here if one is preferred ..... ☐ .....
(There is **No** guarantee that one will be available)

I am a RMUG member/non-member* and I apply for registration for the complete weekend/ Saturday only* at a fee of £ .....
(* please delete as appropriate)

I enclose a cheque payable to RMUG TRAINING WEEKEND for the FULL amount (if this is impossible then a deposit of £50 is required).

NAME.....

Establishment .....

Address.....

.....

.....

Daytime telephone .....

Evening telephone .....

Please complete this form then carefully seal all three open sides before posting - no stamp is needed.

© RM User Group 1997

RM Direct ! - Guaranteed Next Day Delivery

ID-BAR Memory Marker Kit

Theft of memory chips is growing rapidly. The chips are valuable and, until now, almost untraceable.

- A permanent security marker for your SIMMs
- Linked to a 24 hour database

ID-BAR Memory Marker	**£4.99**	059-380
ID-BAR Memory Marker 4 pack	**£18.95**	059-381

Disk Wallet

- Heavy duty fabric disk carry case
- Tough velcro fastening.
- Holds 12 x 3.5 disks in a 22cm x 12cm wallet.

Disk Wallet (12x3.5 disks)	**£8.95**	059-392

RM Direct ! Price Promise

We will ***beat*** your lowest quoted price on any consumable or accessory.

Keyboard Glove

- Protect your keyboard from dust, sand and liquids
- Gloves available for ANY computer keyboard.
- Does not interfere with keyboard use - including touch typing!

Keyboard Glove Application Pack	**£14.95**	059-385

All these products and many more can be seen on our Internet pages:

http://www.rmplc.co.uk/rmplc/rmd/

To Order Phone 01235 826216 or Fax Free on 0800 833872

© RM User Group 1997

RM User Group 20th Annual Training Weekend
Training Programme

The 20th Annual RMUG Training Weekend will provide an ideal opportunity to obtain IT INSET in a most productive, cost-effective and enjoyable way.

Location

The De Vere Hotel, Swindon is located very close to Junction 16 of the M4 motorway, about 90 miles west of London and 30 miles east of Bristol. The hotel has very good sports facilities, including a swimming pool.

Cost

Delegate rates	Members	Non-members*
Full Weekend $	£270	£295
Saturday Only	£ 95	£120

Partners sharing room (no training) £40 extra to cover B&B - other meals to be paid for separately.
Other combinations may be available upon request.
$ Inclusive of accommodation with en-suite bathroom
* Inclusive of 1 year's membership of RMUG.
This year we are asking for you to send the FULL amount on applying, as the hotel requires a very large deposit by July. If there are problems with this please send £50 deposit and negotiate with Maureen explaining your problem.

Session Structure

The sessions on Saturday and Sunday will include workshops and hands-on experience as well as lectures and demonstrations.
Training will take place in small rooms with limited numbers. In addition to the formal programme of sessions there will be opportunities for discussion with both other delegates and RM staff. Throughout the weekend a number of RM staff have volunteered to be available to discuss individual issues and concerns.
The provisional timetable is given here and delegates are requested to select a first choice and a reserve for each of the **three** main sessions. Whilst every effort is made to provide delegates with their first choices it should be noted that some sessions are very popular and are quickly filled (first come first served basis).
Saturday session 5.00 to 6.00 is an open session for practice, network surgeries, using the sports facilities or just relaxing.
Sunday afternoon an Open Forum will take place giving you an opportunity to ask an RM panel any general questions.

Training Session Programme

	A	B	C	D	E
FRIDAY	5p.m. onwards Registration. Dinner followed by Keynote Speaker - Jim Wynn (RM Secondary Marketing Manager, formerly Head Teacher of Chaucer Technology School)				
SATURDAY 9.00 - 10.30	RM UPDATE	ACCESS	KS3 I.T. TEACHING AT THE RIVERBANK	CAD	WEB PUBLISHING
10.45 - 12.15	RM Hands On Consultancy	"	"	"	"
LUNCH 12.3O					
SATURDAY 1.30 - 3.00	RM INTERNET for LEARNING	WORD & EXCEL	KEYBITES (was Babbage) for KS3	DTP with PAGEPLUS	INTERNET ACCESS
3.15 - 4.45	Hands On	"	"	"	"
SATURDAY 5.00 - 6.00	OPPORTUNITY TO PRACTISE		RM SURGERIES - RM Net LM & RM Connect		INTERNET ACCESS
6.00 - 7.00	ANNUAL GENERAL MEETING OF RMUG				
DINNER 8.00 Followed by	Keynote Speaker - Phillip Fox (UCLES Development Officer for IT Qualifications)				
SUNDAY 9.00 - 10.30	LOTUS APPROACH	MULTIMEDIA AUTHORING	MODELLING	CONTROL	INTERNET ACCESS
10.45 - 12.15	"	"	"	"	"
LUNCH 12.30					
SUNDAY 1.30 - 3.00	OPEN FORUM Your opportunity to ask an RM panel any general questions				

For Further Details please contact: **Maureen Wernham on 0181 398 1948** or write to her at **RMUG Training Weekend, FREEPOST, Esher, Surrey. KT10 0BR.**

© RM User Group 1997

FROM: Mark Parkinson,
mark@bodmin-comm-coll.demon.co.uk

TO: david palmer,
100021,3420@compuserve.com

Dear David,

I have just got my email mailbox having been without internet access since changing schools in September. The only thing harder than running your own school systems is taking over at a new school.

Firstly I would like to thank you for the magazine which is both informative and entertaining. How valuable I find it is shown by the fact that it is one of the few things I get in my p'hole that I actually look forward to.

I'd be grateful if you could give me the email addresses of colleagues who you think might be willing and able to share views and advice.

Some immediate areas of interest are:
We are starting an A level course in September. IT or Computing? Which board?
We have LM2 and are interested in using Pegasus Mail for our external and internal mail. We are running MSMail internally at the moment.
Worksheets etc for WW2 and Excel 4 etc?
Which is the best solution for databases from year 7 through to 6th form (including GCSE IT)? Access, Key Plus, Grass, Information Workshop etc?
Connecting Novell SIMS and Net LM.
Is there a market for 386 SX25s (if we move to Connect)? What sort of price?
It would be nice to have an article about RM conferencing in the next issue. — Mark Parkinson

Going Cheap!

Rishworth School will have a number of RM 286 network stations available this summer. They have 5 Meg of RAM, Ethernet cards, and boot ROMs for NetLM/Net 3.0. These machines have been on our main network for some years, but are fully functional, and have floppy drive, mouse, keyboard, and VGA monitor. No reasonable offer refused on 01422 822217 - Bernie Conning.

Dear Sir,
I have recently been given an RM Link 480Z and a Microvitec Cub monitor. Unfortunately, I do not have any parts such as disc drives etc. Please would you print a plea in your magazne from me for such items. Would you please send me a copy of the magazine. If a plea is successful then I will definitely join the Group However, there is no point in me joining if I cannot use my RM and know how much coverage you can give this machine.
Thank-you very much,
Yours sincerely,
Robert Nisbet
01865 351448
1 Silver Birches,
Stanton St John
Oxford, OX33 1HH

Can anyone help Robert? I cannot promise him any current articles on the 480Z but may be able to produce some from the archives. Would any of you like to see some of these reprinted?

 © RM User Group 1997

ACCESS IN SCHOOL ADMINISTRATION

by R Andersen & A Chadwick

The editor has been trying to get me to put fingers to keyboard on this topic for some time, in fact since even before I was persuaded to give a presentation on the subject at the 1994 RMUG Training Weekend. Those who attended that presentation are forgiven for skipping this article.

Those who are unfamiliar with Access, or who have not spent much time with it, may wonder why this article discusses our Visual Basic front end for school assessments. The point is that all the functions that are achieved by our program can be achieved using Access. We happen to have developed a program as part of an evolutionary process.

Background

Our school is an independent co-educational boarding and day school of some 540 pupils aged 11-18. We have a preparatory school for about 120 pupils aged 4-11, but currently these pupils are kept administratively separate to those in the senior school. The school operates a separate administration package in the school offices (currently Dolphin).

My predecessor wrote the school's first assessment program for the BBC micro in the early 1980's. Departments had their own discs which were then collected and the data files merged before printing the assessments for the whole school. This process took about three hours, and in addition all the discs had to be prepared for each assessment period and updated as required by changes in pupil details. Staff were obliged to use the program, although some persuaded other colleagues to enter their assessments for them. The resulting print-outs were generally accepted as saving much time compared with the previous system of copying from broadsheets.

When the school moved to its first RM (Net 3) network, the program was rewritten in BBC BASIC. Although there were various networking issues that had to be resolved concerning programming for shared data, both the time for preparation and for printing was much reduced. Staff also preferred the new program not least because it removed the need for floppy discs.

We must have been one of the first schools to move to Windows, well before it became part of the RM strategy. As soon as Visual Basic arrived we took the opportunity to again rewrite the program to fit more comfortable into our Windows environment. Various methods of

 © RM User Group 1997

storing the data were tried and by the far the most convenient was within an Access database as Visual Basic (version 3 onwards) can use the data directly without the need for any additional links like ODBC.

The Assessment Program

Two or three times each term, staff are required to enter assessments on all the pupils they teach. They can use any of the network stations and there is a deadline after which the program data files are closed for entry, although staff may still see the assessment history of any pupil or group of pupils. Assessments are entered using letters for attainment, numbers for effort. Junior forms therefore get assessments such as A1 (the best), C3 (average), and E5 (worst). Assessments for GCSE and A level pupils are based on the grades that they can achieve and contain not only the standard of work recently achieved but also include predictions. Examples: B2A, N4E etc.

Print-outs are produced of the relevant data for:

Pupils (only their own assessments); Academic Tutors (only their tutees); Housemasters (all their house members); Director of Studies, Second Master and Headmaster (all forms).
All the print-outs are produced (and the pupils assessment slips guillotined) in about 45 minutes.

Program Features

When a user logs on to the network, his user id is available in some form from the system environment. Early versions of the program had to manipulate the user's home directory environment string to provide The variable that is given on RM LM2 as "logonname'. Once the user's id is known, the program is able to offer assessment entry for only the subjects that that teacher teaches. This avoids French teachers entering Maths marks and vice versa.

Entry of assessments can either be by form or by year group. This eliminates the need for teachers of setted subjects to go in search of their pupils. Further help in this matter is given in that the program recognises for which pupils the teacher last entered assessments. Thus if a teacher teaches Brown and enters the assessment by pressing the Enter key rather than using the mouse or navigation arrow keys, his next taught pupil in the displayed group will be selected, skipping over all the other pupils. This is achieved by storing the teacher's user id as the last part of the assessment string.

A supervisor program, separate to the staff program, provides the facilities for printing, opening and closing the entry files, setting the print-out titles with the correct date etc. The file containing the staff/subject data is a simple text file which is edited using Notepad.

 © RM User Group 1997

There are two distinct modules in the staff program. One is for entry of assessments, the other is for looking at the pupil and assessment data. Staff can print out from this module, either individual pupil assessment slips, or sheets of data for a group of pupils.

A second version of the staff program is available for the entry of termly exam marks. This program is for entry only, and the only output from the supervisor program is in the form of a text file (tab delimited) which can then be loaded in to Excel (or other spreadsheet) for processing and analysis.

The security of the data is important. The data must only be available to staff. This is achieved by creating a share to the data and program area to which only staff have access. An MTSL (kept in the group drive for staff) connects the share and starts the program. On exit, the share is disconnected. The assessment program writes to a log file for each member of staff, noting start and end time of both entry and view activities. We have found that by far the biggest danger to the data is the staff themselves either a) through forgetting to log off, or b) through getting a pupil (usually staff offspring) to enter the assessments for them. The only data that can get damaged through such misuses is the data for the current assessment period entered by the teacher concerned. The database itself is regularly backed up on to another network area during assessment periods and daily on to tape by the nature of the network backup.

The program has spawned a Broadsheet/Examination program which is used by staff to enter internal exam results. These are then exported as tab delimited text files which are then used in Excel for processing and analysis.

Use of the Data

The assessments program forms only the "frilly" bit of our Access use. The main thrust of this article's message must be that since we have all our pupil data available to staff on the network in an Access database, various administrative tasks are simplified.

We are able produce lists based on any criteria at short notice. "All pupils in your house aged between 13 and 15 on the 1st of April, in alphabetical order? Don't go George, it's just about to print out!"

We can summarise assessments, statistically if required. (We find that assessments by department/subject are very popular on parents' evenings!)

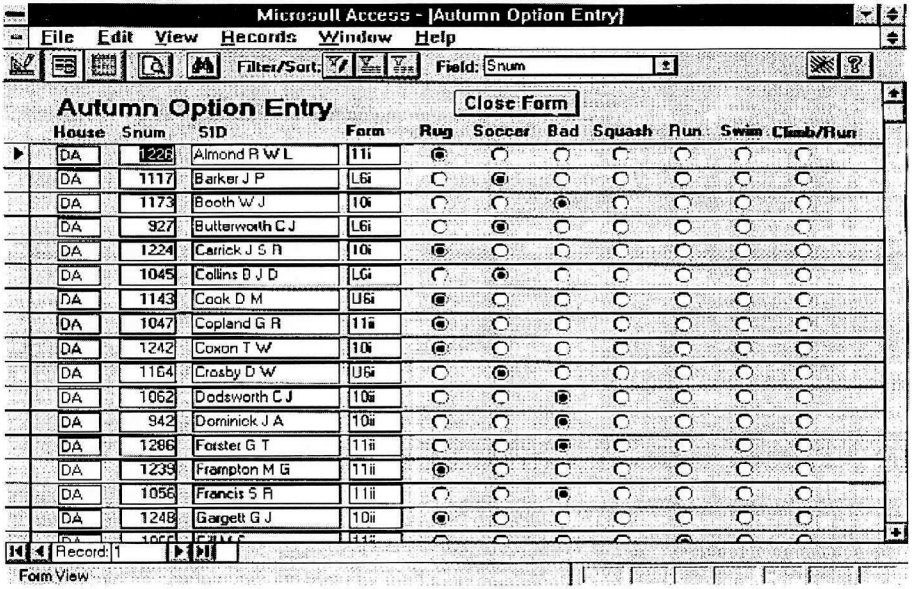
Staff are able to produce their own queries and reports, although sometimes help is required. Currently one member of staff is producing a bed allocation "map" for his boarding house. If a pupil moves room/bed, a simple

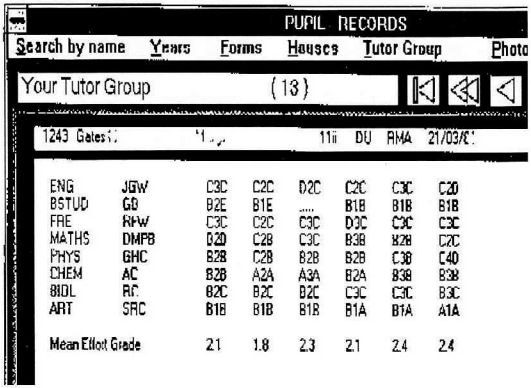
 © RM User Group 1997

change on his record will produce a new map. Another member of staff is automating his modular A level entry and record keeping. List of pupils to be entered will be generated when needed.

The options for games are linked to the pupil database. The head of games receives from house staff the pupil options. These are entered on an Access form. From the data, the games lists are printed and can be kept up to date.

I think this scheme is excellent, saleable and an example to us all!!


Microsoft Access - [Autumn Option Entry]
File Edit View Records Window Help
Filter/Sort:
Field: Snum
Autumn Option Entry
Close Form
House Snum SID Form Rug Soccer Bad Squash Run Swim Climb/Run
DA 1228 Almond R W L 11i
DA 1117 Barker J P L6i
DA 1173 Booth W J 10i
DA 927 Butterworth C J L6i
DA 1224 Carrick J S R 10i
DA 1045 Collins D J D LGi
DA 1143 Cook D M U6i
DA 1047 Copland G R 11i
DA 1242 Coxon T W 10i
DA 1164 Crosby D W U6i
DA 1062 Dodsworth C J 10ii
DA 942 Dominick J A 10ii
DA 1286 Forster G T 11ii
DA 1239 Frampton M G 11ii
DA 1056 Francis S R 11ii
DA 1248 Gargett G J 10ii
Record: 1
Form View


PUPIL RECORDS
Search by name Years Forms Houses Tutor Group Photo
Your Tutor Group (13)
1243 Gates 11ii DU RMA 21/03/8
ENG JGW C3C C2C D2C C2C C3C C2D
BSTUD GD B2E B1E B1B B1B
FRE RHW C3C C2C C3C D3C C3C C3C
MATHS DMPB D2D C2B C3C B3B B2B C2C
PHYS GHC B2B C2B B2B B2B C3B C4D
CHEM AC B2B A2A A3A B2A B3B B3B
BIOL RC B2C B2C B2C C3C C3C B3C
ART SRC B1B B1B B1B B1A B1A A1A
Mean Elliot Grade 2.1 1.8 2.3 2.1 2.4 2.4

 © RM User Group 1997

UK-SCHOOLS
(JUST DON'T LOOK DOWN!)
by Diana Rolf

I'm Designer and Webmaster to the Uk-schools Website at http://members.aol.com/dcrolf/uk-schools, a virtual website for members of the Uk-schools Mailing List, whose members are teachers and academics interested in the use of the Internet in Schools. The site is set up like a DIY store, with self-assembly kits to take away. The idea is that members volunteer to host a page in their own webspace, copy a custom graphic and a page from the *Workshop*, then develop their page in their own way (and to their own level) as part of the site - all I need is the link.

We started in November 1996, and so far it's been a runaway success, with some amazing pages being set up *(check out the excellent *Hints'nTips* section on Web Design and sundry technical matters by your very own Editor!).*

People ask me what it's like being in charge. I tell them to try running a charity event on a high-wire - persuade busy professionals to do something without pay, then try not to think about the sheer scale you're working in, because Uk-schools is a national List, and websites are global! I've got pretty thick skin, but even Attila the Hun must have had the occasional moment of doubt - "Shall I massacre the next ten thousand people or miss the start of 'Eurotrash'?"

This dialogue charts a rare moment early on when I looked down.

I've offered to design some Church kneelers for the Ladies of the Parish to sew, but I've only ever designed web-sites. Help!

Don't panic. Your experience in web design will stand you in good stead.

But I'm not an artist!

We're not talking about art - this is group creativity. Just like virtual web-sites, you'll have to bring out the Parish Ladies' talent. It will be hard work - it's been stifled by a life-time of beige crimplene and poor quality gardening tools. But it was worse for the poor computer experts - they'd struggled for years with shoddy software on cheap, self-destructing hard drives. No wonder their creative instincts were at a low ebb! Make sure they know what

 © RM User Group 1997

you want and then bounce some ideas around.

But I'm not really one of them - I don't go to church and I can't make cakes.

And you don't teach IT! But people don't accept ideas from someone like themselves. They want control from someone different. Pupils accept ideas about homework from teachers because they stand near the door. Parents accept ideas about outrageous breakfast cereals from their children because they wear their caps back to front.

Control?

You had to plan everything, then cruise around to keep an eye on things and keep it consistent. And we're talking seasoned professionals here - many of them nationally recognised as experts in their field! They needed clear direction to save time. Sort out a fleet of designs for the Ladies to mix'n'match and they'll do the rest. People find ideas hard - but they'll help out if they know exactly what to do.

It'll need a clear head!

That's where your professional skills come in. Organising information is your job.

Ok, ok, my bit's easy. What about theirs?

On the virtual website one person looked after just one screen and kept it in their own webspace. They maintained it themselves, so they could develop it as they liked, to their own level of skill, and ask for help if they needed it. One page each was a lot easier than mantaining a whole site! And the result was very professional.
And they weren't even commercial designers...
You just started it off, supervised all the main sections from base, and it built up into a spectacular site - they did it all by themselves.

Like switching on a light!
Exactly. Except that the light gets brighter all the time as more people join in and more ideas are sparked off.

And it was virtually free!
And in Web terms that's a very big deal indeed. Commercially, a web-site on this scale would have cost thousands! And if you can get a website up and running that costs next to nothing because it's shared out by a group, it could establish a formula for virtual websites anywhere. Just think what you could do for self-help groups in Peru, accident support groups in Mongolia...

Hey, do you think I could get the Ladies of the Parish to knit Mouse-mats for the Third World instead?

 © RM User Group 1997

PRINTER'S PIE

by Peter Harris

THE SCIENCE OF SCANNING AND THE ART OF IMAGE MANIPULATION

Part II – Colour: a many-splendoured thing

Film versus Digital

THERE is a story told, true as far as I know, of a large departmental store in the centre of Birmingham that was wanting to expand by buying the Quaker Meeting House adjoining.

Accordingly the manager of the departmental store sent a letter to the Board of Trustees: "Dear Sirs, As we are wishing to expand by buying your premises, we should be obliged if you could reply by return of post with your asking price. Yours sincerely etc."

The following day the manager received a letter which read: "Dear Sirs, As we are wishing to expand by buying your premises we should be obliged if you could reply by return of post with your asking price. Yours sincerely etc."

The manager was at first inclined to treat this as a joke in rather poor taste until he read the signature of the Quaker who had signed the letter – it was a multi-millionaire with the surname "Fry."

In a similar spirit to the above, Kodak have forecast that within eighteen months digital cameras will be turning the tables on conventional cameras, and that the day of the digital darkroom will have arrived.

Last week we attended an exhibition in Leeds where the FujiFilm's Fujix DS-300 digital camera was the star of the show. At £1800 it seems a lot of money, until we remember that before the release of this model you would have to have spent up to £10,000 to achieve similar quality. By the year 2000, 20% of printing will be digital.

Painting really is dying – Wrong medium at the wrong time

The words are not mine but those of Waldemar Janusczak, writing recently in the SUNDAY TIMES. He goes on: "Painting has been our chief means of artistic expression for too long, much too successfully, to die immediately. But ... The information age lies ahead, and blobs of titanium white are ill-suited to the recording of it. Many will regret this. But nobody ought to view this as a tragedy. On the contrary. A new world lies before us, and we now have a new art to describe it. We are, at last, prepared. Surely that is a good thing."

Revenons à Nos Moutons

A 30-bit colour scanner is now available from PC World for £169, an unbelievably low price when compared with that of similar equipment only 18 months ago.

One technical term that we did not define in the last issue was "Bit Depth." This refers to the number of bits that the scanner uses to create the scanned image on screen, giving relevant information to the pixels that form the image.

 © RM User Group 1997

1-bit provides information for the pixel that is either black or white. 4-bit produces an image that can have up to 16 shades of grey (2 x 2 x 2 x 2). 8-bit produces an image that can have up to 256 shades of grey.

24-bit, which is the recommended minimum for a colour scanner provides over 16 million colours (more than the human eye can distinguish between). Adobe Photoshop and other similar programmes work with 24-bit information. Scanning in 30-bit or 36-bit merely provides more accurate 24-bit information in a similar way that three places of decimals can provide a more accurate two places.

It is normal usage therefore when scanning to refer to bit depth and resolution, and type of scan (e.g., colour photo, 256 colours, black and white photo, line art etc.), and the Golden Rule of Scanning is to always scan *(if the English language didn't want us to split an infinitive it would put a hyphen in-between!)* with the absolute minimum that is needed for your purpose, as it is so easy to produce a very large file. An A4 full-colour scanned image can become a 20 MG file. In the world of business we operate a similar philosophy – BATNEEC (Best Available Technology Not Entailing Excessive Cost).

The following is a rough guide to general usage:

A multimedia image or web page image should be scanned at 72 dpi as this is the resolution of the monitor on which the image will be displayed.

When the printout will be a halftone you scan at twice the halftone screen. On a 300 dpi laser printer the halftone screen is 60 lpi; so it is advisable to scan at 120 dpi (150 dpi at the most). In the printing industry the cheapest paper is *newsprint,* the paper used for printing mass circulation newspapers. Because of its low quality the halftone screen used is usually 80 lpi; so we would scan at 160 dpi.

When we print on a *gloss art paper* we can print up to a 150 halftone screen; so we scan at 300 d.p.i.

For scanning line art you are recommended to use the maximum optical resolution available, or even to use the interpolated resolution. This tends to join up broken lines and missing portions.

The top-class printers who have as their customers Blue Chip companies such as Glaxo-Wellcome or BAA now use "stochastic" screening which enables them to print a 300 halftone screen. Instead of the halftone dots being laid out on a regular grid they are mathematically produced at random to create an overall average effect which is much superior. However the equipment needed to produce such works of excellence costs the earth and has to be upgraded all the time to keep abreast of the latest improvements. When these machines are three years old they are handed down to other printers lower down the quality chain in a similar way that Premier League footballers are transferred to First or Second Division sides as they get older. We have recently purchased a previously-used Heidelberg GTO52 with numbering and perforating units for £28,000 – a new one would have cost us £50,000+.

OCR (Optical Character Recognition)

All scanners seem to include OCR software – usually the LE version. The upgrade to the full professional version is usually about £80. PaperPort, for example, comes with Omnipage Lite and also sup

 © RM User Group 1997

ports Caere Omnipage Professional and Xerox Textbridge. You are recommended to scan at 1-bit and 300 dpi.

The first thing I do when the scanned text has been imported into a word processing programme is to use a spell-checker. Even the best OCR programmes are not 100% perfect, and unfortunately the errors made are not the simple ones of letter transposition or minor misspellings but they're errors of visual identity. The letters li might become h, and the letter m might become rn – often the spell-checker won't catch them. Numbers too are easily misrecognized by OCR software.

Changing the scan brightness (which is similar to changing the setting on a photocopying machine) can improve image quality and make it easy to read. For example, a note written in a light pencil needs to be scanned darker, and a smudged or dark copy may benefit from being scanned at 25% lighter.

Mission Impossible

"They showed him the job that couldn't be done;
With a smile he went right to it.
He tackled the job that couldn't be done –
And couldn't do it!"

In the very last verse at the end of the Gospel of St. John the writer (probably the scribe, weary from taking down the dictation) adds the words: "And there are also many other things which Jesus did, the which, if they should be written every one, I suppose that even the world itself could not contain the books that should be written. Amen."

This use of excessive exaggeration with no intent to deceive is a literary device known as a hyperbole (not to be confused with the mathematical hyperbola!). The "Mission Impossible" to which I am referring is to explain about colour in a black-and-white publication – perhaps very difficult would be more accurate.

RGB v CMYK

The human eye sees colour by the interaction of light photons on cones and lines on the retina. We have three: red, green and blue (hence RGB), and these three in combination produce the complete spectrum of visible light that we can see. Visible light is only a small part of electromagnetic radiation, which goes from gamma rays (which have very small wavelengths) to radio waves (which have very large wavelengths). Some creatures can see using ultraviolet or infrared light, as can snipers using special equipment.

The computer monitor and the television monitor have three guns which correspond to red, green and blue. One of our older computers has lost one of these three guns; so we have some unusual combinations of colours.

When we scan for use in multimedia or for a web page we use RGB; when we need to print on paper we convert to CMYK (cyan ink, magenta ink, yellow ink and black ink) – the K in CMYK stands for blacK because the B has already been taken for blue.

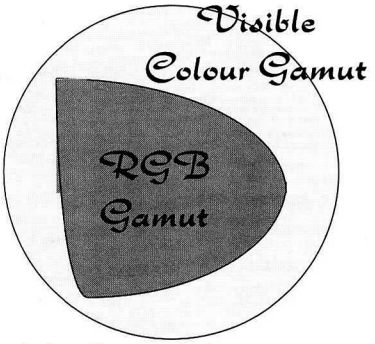
Red, green and blue are called *additive colours;* cyan, magenta and yellow are called *subtractive colours.* Theoretically these three subtractive colours when printed on top of one another should produce black. In practice, because of impurities in the inks a dirty very dark brown is the result; so, to produce a true black, a black ink is printed as well. The cartridges in inkjet printers use the same principle – our Canon BJC 4550

 © RM User Group 1997

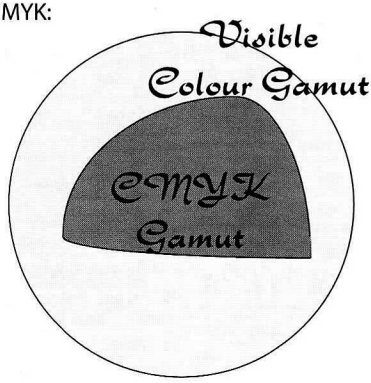
and Epson Stylus Color Pro XL inkjet printers both have two cartridges: one produces cyan, magenta and yellow; the other produces the black. On the cheaper inkjet printers, where you swop the black cartridge for a colour cartridge, it is very difficult to produce a true black.

Warning – Out of Gamut!

Using RGB and CMYK it is not possible to produce all the colours that are in the visible light part of the spectrum. The following diagram represents the area that can be represented by RGB:



and the diagram below represents the smaller area that can be represented by CMYK:



Most colour work produced by the printing industry is CMYK. Shorter runs are produced on a single-colour machine. After the cyan has been printed, the machine is cleaned up and the other inks printed in turn. When longer runs are needed a four-colour machine is used: in effect this is four single-colour machines connected in tandem so that, starting with a white sheet of paper, a fully-printed sheet comes out at the other end.

If a copy of John Constable's "The Hay-wain" is produced in CMYK and compared with the original it is obvious that the colours are very inexact. A copy purchased from the National Gallery, which is a much more accurate representation, has probably been printed in up to fifteen separate passes through the printing machine.

The latest colour software in PageMaker 6.5 and Quark Xpress 4.0 is hexachrome: a vivid orange and a vivid green are added to an amended CMYK set of inks. The final printed product, especially of flesh tones, is much more accurate, though obviously a six-colour machine has to be used.

The expense of printing in four colours means that cheaper substitutes have been developed for printing short runs: the colour copier, the digital press and the computer-to-plate-on-the-machine printing machine.

Colour Copiers can now be linked directly to a computer, which means that the information does not have to be scanned in. In a large office obviously all the computers would be networked.

The digital printing machines start at £100,000. Because the information is digital, personalised brochures can be produced, and information cam be updated very quickly.

The Heidelberg Quickmaster Di46 costs £320,000 but can be ready to print at 1270 dpi in six minutes; the quality is very good.

 © RM User Group 1997

SHOPTALK

by David Palmer

We have had a really crazy term and it culminated in appropriate style with a number of special events.

The first of these was a trip to London to collect an award from the RM/Cisco Internet competition. The details are on the Euroschools web page and we are very excited in that we will be getting our own domain name registered and an ISDN2 link. This will allow us to start thinking about creating multimedia web material.

Then we were invited to Roundhay Park in Leeds to meet David Bellamy since we have been hosting some pages for a rainforest charity called Equafor and they were launching their own web site.

Lastly, on a more personal note, I went to Durham for my eldest son's graduation and he was lucky enough to get a speech from their Chancellor, Peter Ustinov. I don't think I have ever seen a better public address! He was witty and moving in turn and played the audience like the virtuoso he is.

When we got home, my son wanted to know what he could do about getting an email address since he couldn't use the college system anymore. I suggested either bigfoot or hotmail, web based services which are currently free. He opted for the latter and in a few minutes he obtained the address ojpalmer@hotmail.com (should you wish to write and offer him a job). The process was smooth and an object lesson in how things should work! He can now check his email from any browser anywhere and, since his mail appears as HTML pages, can also have a number of online magazines delivered free to his mailbox.

By some trick of irony, I was reading 'Silicon Snake Oil' by Clifford Stoll when I went on the train to London. This is a book which 'exposes the darker side of the information superhighway'. Apart from the obvious connection, this is co-incidental in that he mentions the online magazines in the book -in very unflattering terms. He also produces this comment, which I particularly liked:-

'With everyone able to upload their works to the network, the Internet begins to resemble publishers' slush piles. It's up to the reader to separate out the dregs. What's missing from the network are genuine editors.

Ah, editors! The bane of writers, reporters, and publishers, editors yet serve as barometers of literary quality and advocates for the reader. Without them on the nets, you simply have no way to tell what's worth reading.

By eliminating editors, our networks demonstrate their importance. There are plenty of writers on the Usenet, but few editors. It shows.'

While I would never claim to be a 'genuine editor' it is nice to think that the species has at least one fan.

 © RM User Group 1997

GOT A PROBLEM?

One of the main functions of the RM User Group is to assist members who are having problems with either hardware or software, no matter how trivial or complex that problem seems to be. Members of the committee have a wide range of experience in the use of RM equipment, including systems no longer in production, and can be contacted in the evenings or at weekends...times when you are most likely to be mulling problems over and when RM's own Customer Support lines are unavailable.

RM themselves do not claim to have extensive knowledge of products which they don't produce themselves (such as Excel or Page Plus), and although they can tell you how to install such packages on their equipment and how to get started, they cannot be expected to give you in-depth support in using them. On the other hand, the RM User Group has a membership drawn almost exclusively from teachers using these products on a daily basis and consequently have probably "been there, done that, bought the T-shirt" and most likely even "made the jigsaw" too.

So do get in touch with a member of the Committee (see elsewhere in the magazine for contact details) if you are experiencing some difficulty or other or want some advice. If we can't solve the problem ourselves then we probably know someone who can, and if even that fails we can publicise the problem in the RMUG Magazine.

Got any Hints and Tips? Got any good teaching ideas involving IT?

If so, your magazine needs you! Look...it's like this: the RMUG magazine is entirely dependent upon contributions from members to fill its pages. This means you! We know for a fact that some members shy away from contributing articles because they feel themselves not to be experts. Don't kid yourselves: if you've done an interesting lesson in your subject from an IT point of view, then you're an expert and we'd like to hear about what you did. What you write doesn't have to have high "nerd appeal"...in fact, forget the "anoraks" completely because most members are normal people like you. Honest.

The editor welcomes all manner of items from "one-liners" to classroom ideas and software reviews, so get writing and make his day (he'll even pay £5 per printed page if he likes it.....Just think: two two-page articles and you've got your annual membership fee back.....).

If (If? When, surely?) you do write an article then the best thing is to submit it to the editor as a disk file in Word for Windows or Windows Write format. He's a reasonable chap so other word processor formats are probably OK too, but it would be worth checking first in case he hasn't got a copy of Edlin Lite for Windows 95. Alternatively you can e-mail it to him or sharpen a few goose quills (but please not carrier pigeons: they just make too much mess).

 © RM User Group 1997

Membership Form

Please use capitals

Mr/Mrs/Miss/Ms .....

Job title (if appropriate) .....

Address .....

.....

.....

Postcode .....

Telephone .....

I enclose a cheque payable to RMUG/order for £20. If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent.
In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential and we are registered as Data Users under the Data Protection Act.
Are you involved in education?

Yes ☐ No ☐

If yes, with what age range do you work:

below 11 ☐ 11-18 ☐ 18+ ☐

Do you use a computer at home?

Yes ☐ No ☐

If you object to your details being passed on to other members of the user group, please check this box ☐

Please send your form and payment to:
RMUG, FREEPOST, Esher, Surrey, KT10 0BR

You may photocopy this form if you do not wish to cut your magazine.

 © RM User Group 1997

THE NEW RM SOFTWARE LENDING LIBRARY

Trial selected software titles free for 7 days with our new Software Lending Library!

From the regular feedback we receive from our customers, we realise that one of the most important influences when deciding to purchase curriculum software is the ability to 'try before you buy'.

As a result of your comments and as part of our continuing drive to simplify the software selection process, we are therefore proud to introduce, for a trial period, our **Software Lending Library**!

Under this pilot scheme, you will now be able to try selected educational titles before you purchase them, you can evaluate them against your own particular requirements, pass them to a colleague for a second opinion or even try them out on a willing class!

How does it work?

Simply select a title from the list below, fax us your details and we will send you a copy of the title* (CD only), together with an order form with which you can place your order for the full product.

After your 7-day trial, post the title and your order form back in the pre-paid envelope provided or request another title in the Library.

Remember, with the **Software Lending Library**, there is no commitment to buy - if you decide not to purchase a title, simply return the loan copy without the order form!

Which titles can I choose from?

The **Software Lending Library** contains a selection of our most popular titles, selected for their ease of use and relevance to Curriculum requirements. For full details of each title and any system requirements, please see the relevant page in the Curriculum Software section of our Software Peripherals and Accessories Catalogue.

Art
Great Artists (Attica)
Art Store: Looking at Animals (Anglia)

Modern Foreign Languages
En Route (YITM)

English
Inside Track to GCSE Success: English (Longman Logotron)

History
History of the World (Dorling Kindersley)
How We Used To Live - Late Victorians (YITM)
The Troubled Century (YITM)
Romans! (Anglia)
John Cabot & The Merchant Venturers (Anglia)

Mathematics
Inside Track to GCSE Success: Maths (Longman Logotron)

Geography & Natural Science
World Reference Atlas (Dorling Kindersley)
Encyclopedia of Nature 2.0 (Dorling Kindersley)
Inside Track to GCSE Success: Geography (Longman Logotron)

Science
Encyclopedia of Science 2.0 (Dorling Kindersley)
Inside Track to GCSE Success: Science (Longman Logotron)
The Digital Frog (Longman Logotron)
Being a Scientist (Anglia)
Understanding the Body (Anglia)

Design & Technology
The Way Things Work 2.0 (Dorling Kindersley)

Religious Studies
Aspects of Religion (YITM)

What next?

Now you have made your selection, simply fax your request to RM on your school's headed paper to our

Free Fax number: 0800 833872.

All we need to know is which title you require and your name, address and telephone number. If the title is available, you can expect to receive it within 3 days.

* **Note:** if all copies of the requested title are on loan, we will add your details to our Library Waiting List and inform you accordingly.

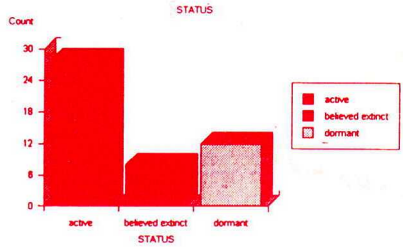
Latest prices, news and order form on http://www.rmplc.net/rmplc/rmd/index.html

Grass *for Windows*

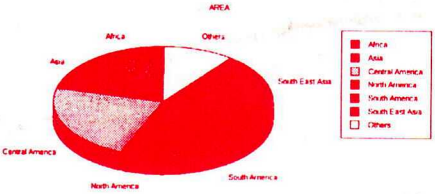
A simple-to-use database program for KS 2-4.

Produced in association with Newman Software over eighteen months, this is a completely new version of the original program. The result is a straight-forward, yet fully featured database ideal for teaching the concepts and use of databases in schools.

- Full on-line help and easy-to-follow user guide.
- The number of records and fields limited only by memory.
- Form and table view.
- Comprehensive graphing facilities.
- Fully configurable (advanced facilities can be turned off).



Records available. 23
AREA includes "america"
Cotopaxi Ecuador South America 5978 active
Popocatepetl Mexico Central America 6452 active
Sangay Ecuador South America 5410 active
Tungurahua Ecuador South America 5033 active
Cotacachi Ecuador South America 4937 active
Purace Columbia South America 4756 active
Wrangell USA North America 4269 active
Tajmulco Guatemala Central America 4210 active
Tacana Guatemala Central America 4064 active
Acatenango Guatemala Central America 3960 active
Colima Mexico Central America 3850 active



- Loads existing Grass and Grasshopper files as well as files created by most popular database and spreadsheet programs.
- Requires 386SX processor or better, and at least 4MB of RAM.
- Available for Windows 3.0 or later (including Windows 95).
- Fully network compatible.

FREE EVALUATION DISK AVAILABLE

Site Licence Prices:

Primary School	**£49**
Secondary School	**£99**

Please order from
Newman Software Limited
Newman College,
Genners Lane,
Bartley Green,
Birmingham, B32 3NT.

Telephone: 0121 476 1181

(Please specify if for Windows 3.0.)

All prices exclude p&p (at £2.50) and VAT at the current rate.

flo **COMPUTER SERVICES**
14 Hutton Close, Keynsham, Bristol, BS18 1XW
Telephone and Fax: 0117 986 0885
email: flocs@rmplc.co.uk